

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/003262 A1

(51) International Patent Classification⁷: C10G 47/14

(21) International Application Number:
PCT/EP2004/006979

(22) International Filing Date: 28 June 2004 (28.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
MI2003A001361 3 July 2003 (03.07.2003) IT

(71) Applicants (*for all designated States except US*): ENI S.P.A. [IT/IT]; Piazzale E. Mattei, 1, I-00144 Rome (IT). INSTITUT FRANCAIS DU PETROLE [FR/FR]; 1 et 4, Avenue du Bois Préau, F-92852 Rueil Malmaison (FR). ENITECNOLOGIE S.P.A. [IT/IT]; Via F. Maritano, 26, I-20097 San Donato Milanese-Milan (IT).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): CALEMMA, Vincenzo [IT/IT]; Via G. Pascoli 36/G, I-20097 San Donato Milanese-Milan (IT). FLEGO, Cristina [IT/IT]; Viale Ortles, 90, I-20139 Milan (IT). CARLUCCIO, Luciano,

Cosimo [IT/IT]; Via Alfonsine 1, I-20097 San Donato Milanese-Milan (IT). PARKER, Wallace [US/IT]; Via Liberazione 39-3, I-20068 Peschiera Borromeo-Milan (IT). GIARDINO, Roberto [IT/IT]; Via Falcone, 1, I-20080 Besate-Milan (IT). FARACI, Giovanni [IT/IT]; Via Morandi, 26, I-20097 San Donato Milanese-Milan (IT).

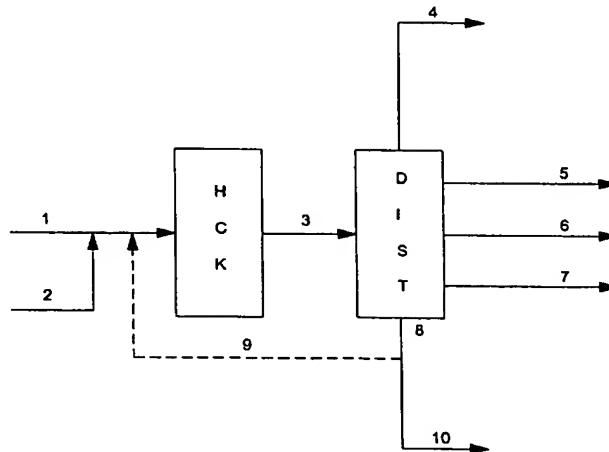
(74) Agents: DE GREGORI, Antonella et al.; Ing. Barzand & Zanardo Milano S.p.A., Via Borgonuovo, 10, I-20121 Milan (IT).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH,

[Continued on next page]

(54) Title: PROCESS FOR THE PREPARATION OF MIDDLE DISTILLATES AND LUBE BASES STARTING FROM SYNTHETIC HYDROCARBON FEEDSTOCKS



WO 2005/003262 A1

(57) Abstract: Process for the contemporaneous production of fuels and lubricating bases from synthetic paraffinic mixtures, which includes a hydrocracking step in the presence of a solid bi-functional catalyst comprising: (A) a support of an acidic nature consisting of a catalytically active porous solid, including silicon, aluminum, phosphorus and oxygen bonded to one another in such a way as to form a mixed amorphous solid characterized by an Si/Al atomic ratio of between 15 and 250, a P/Al ratio of at least 0.1, but lower than 5, a total pore volume ranging from 0.5 to 2.0 ml/g, with an average pore diameter ranging from 3 nm. to 40 nm, and a specific surface area ranging from 200 to 1000 m²/g; (B) at least one metal with a hydro-dehydrogenating activity selected from groups 6 to 10 of the periodic table of elements, dispersed on said support (A) in an amount of between 0.05 and 5% by weight with respect to the total weight of the catalyst.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.